Apparatus for analyzing an audio signal with regard to rhythm information of the audio signal by using an autocorrelation function

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Abstract

An apparatus for analyzing an audio signal with regard to
rhythm information of the audio signal by using an
10 autocorrelation function comprises a filter bank for
separating the audio signal into at least two sub-band
signals. The sub-band signals are examined with regard to
periodicities by an autocorrelation function, to obtain
rhythm raw-information for the at least two sub-band
15 signals. To reduce or eliminate the ambiguities of the
autocorrelation function for periodical signals, the rhythm
raw-information is postprocessed to obtain postprocessed
rhythm raw-information for the sub-band signal. The rhythm
information of the audio signal is established based on the
20 postprocessed rhythm raw-information. By the sub-band-wise
ACF postprocessing, ACF ambiguities are already eliminated
where they originate, and rhythm portions are added at
double tempi, which an autocorrelation function processing
does normally not provide, so that, as a result, a more
25 robust determination of the rhythm information of the audio
signal arises.